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ABSTRACT

California State Standard 7.7 is delineated in the following manner: "Students compare and contrast the geographic, political, economic, religious, and social structures of the Meso-American and Andean civilizations." Seventh-grade students study the locations, landforms, and climates of Mexico and Central and South America and their effects on Mayan, Aztec, and Incan economies, trade, and development of urban societies; study the roles of people in each society; explain how and where each empire arose and how the Aztec and Incan empires were defeated by the Spanish; describe the artistic and oral traditions and architecture in the three civilizations; and describe Meso-American achievements in astronomy and mathematics. The Mayan civilization occupied the area of what is now Honduras, Guatemala, and the Yucatan Peninsula. The Inca Empire, which reached its height around 1438-1532, was centered in what is now northern Chile, Peru, and Ecuador, with its center at Cuzco. The Aztec Empire was centered in the Valley of Mexico. This lesson discusses the uses and significance of the topic ("Beginning the Topic"; "Developing the Topic"; "Culminating the Topic"); activities for other topics; extended and correlated activities; resources for the sample topic; general resources; visual and performing arts resources. Includes appendices: "Hello, Columbus" and "Geographic Background and Concepts: The Americas". (BT)

CALIFORNIA History-Social Science

Course Models

World History and Geography: Medieval and Early Modern Times

Meso-America and the Andes

Grade 7 Model Lesson for Standard 7.7

Edited by Dr. Michelle Zachlod

2001

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World History and Geography: Medieval and Early Modern Times

Meso-America and the Andes

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Grade 7
World History and Geography:
Medieval and Early Modern Times

Meso-America and the Andes

Standard 7.7: Students compare and contrast the geographic, political, economic, religious, and social structures of the Meso-American and Andean civilizations.

7.7.1 Study the locations, landforms, and climates of Mexico, Central America, and South America and their effects on Mayan, Aztec, and Incan economies, trade, and development of urban societies.

7.7.2 Study the roles of people in each society, including class structures, family life, warfare, religious beliefs and practices, and slavery.

7.7.3 Explain how and where each empire arose and how the Aztec and Incan empires were defeated by the Spanish.

7.7.4 Describe the artistic and oral traditions and architecture in the three civilizations.

7.7.5 Describe the Meso-American achievements in astronomy and mathematics, including the development of the calendar and the Meso-American knowledge of seasonal changes to the civilizations' agricultural systems.

Sample Topic: Context of time and place; key persons, of each civilization (describes related research, and time-line activities for each topic)

Suggested Time for the Topic: 6-7 class periods

Significance of the Topic

The development and rise of major sedentary cultures of Central and South America are essential topics of study for the seventh grade course described in the *History-Social Science Framework*. The impressive achievements in architecture, the arts, mathematics, astronomy, and other areas are fascinating to students and offer points of comparison with civilizations in China, India, Egypt, Mali, Songhay, the Middle East, and Europe.

The Mayan civilization occupied the area of what is now Honduras, Guatemala, and the Yucatan Peninsula. It reached its height from approximately the fourth century to the tenth century A.D. The Inca Empire reached its height around 1438-1532, during the era of the Spanish conquests. The empire was centered in what is now northern Chile, Peru, and Ecuador, with its center at Cuzco. What is regarded as the high period of Aztec civilization transpired throughout the late 1400s and 1500s and, like the Incan Empire, was concurrent with the era of Spanish invasion. The Aztec Empire was centered in the

Valley of Mexico, its major territorial expansions having been made mostly during the 1400s.

Lessons from History: Essential Understandings and Historical Perspectives Students Should Acquire highlights some of the learnings vital to this unit. It points out that, like many other civilizations, the Mayan, Aztec, and Incan civilizations created elaborate agricultural systems, hierarchic societies and states, tax and communications systems, law codes, and state religions. Students should understand how each developed and differed, as, for example, in their communal use of the land and in their treatment of weaker, subjugated peoples and of the lower orders in their own societies.

The Mayans, in the tenth century A.D., migrated from Guatemala to the Yucatan Peninsula where they developed their imposing temples, an ideographic writing system, mathematics, astronomical studies, and a calendar more accurate than the European calendar of that time. Students should compare these achievements with those of the Aztecs, who migrated to the central Mexican plateau in the 13th century A.D. and within the next two centuries conquered all of central Mexico. Students should understand something of Aztec religion. Their dependence on slavery and their propitiatory offerings of human sacrifice are also important to consider, not to pique student interest but as an explanatory reason for the crucial--and otherwise puzzling--support of the conquered peoples of Mexico for Cortez's rapid conquest of the Aztecs. Important also is the impressive architecture of the Aztecs, their effective governmental system, and accomplishments in developing the pictograph and calendar.

Finally, students should understand the Incan civilization of the high Andes: its highly centralized governing system, all-powerful emperor, and highly structured society; its laws administered by judges; its tightly organized and productive agricultural system of terraced fields on which the wealth of the empire rested; its cities; and its effective systems of communication and trade, knitting together a rural society spread out for nearly 3000 miles from Ecuador through Chile.

Once contact with Europe was established, the lack of significant wheel and iron-working technologies became a serious disadvantage and proved to be pivotal in the conquest of the Mayans by Spain and Portugal. William H. McNeill's history, *Plagues and People* (Doubleday, 1978), sheds further light on the influences at work during that time.

The activities for the sample topic require students to process what they have learned about each of the civilizations. Activities described in "Beginning the Topic" help students link this unit with past learnings and strengthen students' impressions of the contemporaneity of evolving world events. Thus, they gain a more solid understanding of time and place.

Activities in "Developing the Topic" show how, for each of the civilizations, students can apply *focus questions*, key questions that are applicable to any historical period. Collaborative assignments help students complete the products of their analysis: the comparative time lines and outline maps recommended in the Framework. Brief oral

reports culminate the topic as students share their work with classmates. The time lines and maps may be revised and extended throughout the year. To some extent, the sample lesson demonstrates how the Framework's goal of "Skills Attainment and Social Participation" (see *Framework*, pages 23-26) can be merged with the historical and geographic content of the unit.

In general, the study of each civilization should include examples of social achievements and cultural sophistication; consideration of its likely "mental map" and world view; and examination of some of its negative dimensions, including slavery, human sacrifice, and military conquest to support an expanding government. The essay reprinted as Appendix I provides teachers with background information touching on these and related issues.

Beginning the Topic

The activities outlined in this section apply to the first topic noted on the opening page of this unit and should require a little more than one 40-minute class period.

1. To generate students' interest in the unit in an entertaining way, the teacher may read aloud a folktale from the Mayan culture. *Why There Is No Arguing in Heaven* is a myth retold by Deborah Nourse Lattimore in a picture book that is sophisticated enough for many seventh graders to enjoy. Teachers may point out briefly some of the images and designs that reflect Lattimore's research in adapting illustrations for the book. Different tales may be found in Douglas Gifford's *Warriors, Gods and Spirits from Central and South American Mythology* and in John Bierhorst's *The Monkey's Haircut and Other Stories Told by the Maya*; many seventh graders enjoy David Wisniewski's picture book *Rain Player* (see "Resources for the Sample Topic"). After the reading and brief discussion, the teacher gives an overview of the unit and explanation of what the study will entail.
2. Students are provided with outline maps and colored pencils or crayons. They indicate the general locations of the Mayan, Aztec, and Incan civilizations at the height of their cultures. Students may consult wall maps or textbooks. They label locations, and during this short activity, indicate on the maps the approximate years in which each civilization flourished.
3. Students meet with partners to discuss the following questions:

Based on your studies this year, what important events were occurring elsewhere in the world during the times when the Mayan, the Aztec, and Incan civilizations flourished? What important persons were active during those times?

To answer these questions, students first rely on their recall of the units studied previously and list learnings on notepaper. Next, students refer to textbooks and other resources to add information to their notes and confirm their recollections. Although students are working in pairs at this point, each student should keep a

personal set of notes for the homework assignment given later in the period. Finally, the teacher calls on partners to read their notes aloud during a brief sharing period.

Students' notes form the basis for a comparative time line completed for homework. The teacher shows two samples of comparative time lines to consider: parallel time lines, each representing a different culture; and a single time line, on which events are color-coded to symbolize different cultures. Students may devise other ways of making time lines if they choose. Each student develops a draft, incorporating persons and events studied during units I, II, III, and IV as well as persons and events studied during the sixth grade course (e.g., Siddhartha Gautama, the era of the Roman Empire that was concurrent with early Mayan culture).

4. The next day, the teacher asks students to volunteer to explain their time lines and the persons and events they included.

Using their knowledge of history, students consider the extent to which the various cultures might have been aware of each other. For example, could an Arab caliph have known about events among the Mayas? Would Mansa Musa have been familiar with events in the lives of the Aztecs?

The teacher explains that the individual's concept of world geography and of other peoples of the world has changed dramatically since the earlier times noted on their time lines. In earlier times, people's "mental maps" (how they saw themselves and their native lands in relation to other places) encompassed a much smaller territory than those of people of today. Comparative time lines and maps help us to gain a mountain-top view of historical events that were not known about by all people at the time that they occurred. Today, people tend to take for granted their concepts of the "world" and "humanity"; during earlier times, people's concepts of these entities were quite different. Neither concept, as it is used today, was part of people's controlling ideas or world consciousness. Much of the seventh grade course is devoted to people and events that brought about this change in global awareness.

The time lines are placed in students' portfolios. Periodically throughout the year students may revise and extend their comparative time lines so that by the end of the seventh grade they have developed a unified time frame that highlights major events and persons. An outline map of the world can be developed by students to show the location of cultures studied during the year.

Developing the Topic

1. On the day that students begin the study of the Mayan civilization (the second topic on the opening page of this unit), the teacher returns students' time lines and map drafts, which have been reviewed and commented on. After the study of the Mayan, Incan, and Aztec civilizations, students will revise their time lines to include these cultures.

To guide students' selection of persons and events to be included in their time lines, the teacher writes focus questions on the chalkboard and reviews them with the class. The questions help students to think in terms of some general ideas that are applicable to virtually any historical period and to relate these ideas to the civilizations studied in this unit. Copies may also be distributed to students for future reference. Guiding focus questions include:

What events or persons brought about major change?

What events or persons fostered a continuity of ideals, beliefs, or ways of life?

What technological advancements occurred? When? Consider the reasons for their importance when selecting them for your time line.

What events point up the important interaction between people and their environment?

What events of conflict or cooperation are notable?

What are some instances of cultural or political interaction, such as trade or warfare?

What are the high points or eras of cultural achievement? Give examples that made these eras "high" (e.g., from art, architecture, writing, inventions, cities, travel, or communication).

How were land forms, climate, and natural resources put to use?

What were the principal crops, herds, and hunting prey? How did people relate these to religious practices?

Were there instances of slavery or human sacrifice? What were the reasons for them?

As the study of the Mayan civilization proceeds, students keep in mind the guiding questions, making notes of any pertinent information. During the fourth class period devoted to the Mayan civilization, ten student teams of three or four persons each are assigned one of the guiding questions. For a portion of the period, teams do research to answer the questions as fully as they can. They consult textbooks, encyclopedias, reference books such as *The Mayas* by Pamela Odijk, and other library resources, making notes pertaining to their assigned questions.

For homework, students revise and finalize their notes. Each student should be aware that his or her group has the responsibility of becoming the class authority on the assigned question. Fellow classmates may call on each group for guidance or clarification later in the unit.

2. On the fifth day of the Mayan study, a strip of butcher paper cut to 12' x 1' (3.6 metres x 0.3 metre) has been mounted high along one wall of the classroom. Ten categories,

corresponding to the guiding focus questions, are copied on the chart. Student groups are given ten minutes to meet and pool and refine their notes. Each group is given a sheet of newsprint that measures 11" x 17" (27.9 x 43.2 centimetres). A scribe in each group writes the notes neatly and concisely on the paper so that the notes can be read at a distance. It is important that scribes write with the papers in a vertical position. The names of the team members are written at the bottom of the paper. A representative from each group mounts the group's paper beneath the question which they researched. During the following ten minutes, the teacher reviews the combined findings with the class, questioning, clarifying, and commending students on their notations.

Students now return to the time-line activity and select at least six items from the charts to be incorporated in their Mayan time lines. The selections are to be made on the basis of historical impact or cultural importance. In their journals, students briefly justify the selections they made.

3. Later in the unit, during the last two days devoted to the Incas, this same "research, chart, time-line, and journal" sequence is repeated, but student teams are assigned a different guiding question to research. Odijk's *The Incas*, Steeles's *The Incas and Machu Picchu*, and Kendall's *The Incas* are helpful references (see "Resources for the Sample Topic").

4. On the last two days devoted to the Aztecs, the sequence is again repeated, with teams being assigned yet another guiding question. This time, students should take more initiative for the task and work with greater certainty and self-reliance. Wood's *The Aztecs*, Dineen's *The Aztecs*, and Odijk's *The Aztecs* are useful for students' research (see "Resources for the Sample Topic").

Near the close of the last class period devoted to the Aztecs, students are assigned brief oral reports for the next day. They will be required to show classmates their new drafts of time lines incorporating Mayan, Incan, and Aztec studies. In addition, students choose from their time lines three events or persons (one for each culture) and explain to the class the reason for the selections. For example, a student might explain why King Pacal (Maya), the conquest of the Cuzco Valley (Inca), and the settlement of Lake Texcoco (Aztec) are significant and, therefore, good selections for his or her time line. Reports should last no longer than two minutes per student. Students may need to refer to their journals in preparing for the oral reports.

Culminating the Topic

The next day, students meet in three large groups. Each student delivers the assigned oral report to his or her group. The reports should be completed within 30 minutes. Students turn in their time lines for evaluation by the teacher.

The remainder of the class period is conducted as a whole-class activity. Students brainstorm ideas in response to the question, Why can we say that the Mayan, Incan, and Aztec were important civilizations? To begin, the teacher briefly explains some of the

characteristics commonly regarded as essential to advanced societies and asks students to consider ways in which the three civilizations demonstrated these features.

When imagining what life was like or not like for people in a given society, students may be helped by considering different aspects of life separately, as a first step. The teacher may begin by briefly explaining the term quality of life and asking the following questions: Based on your knowledge, do you think the politics of each of these societies (e.g., laws, government, system of justice) provided a good *quality of life* for their citizens? Given the nature of each civilization's labor and its rewards for labor, its agriculture, and its commerce, did its economy contribute to a good quality of life? Why? Was a good quality of life ensured by each society's social life (e.g., class structure and differences, family life)? Is it possible for us today to fully know what it was like to have lived in civilizations of so long ago?

Students reexamine their maps of the three American civilizations and compare them with political and physical maps of the same areas today. Descendants of these early peoples still reside in these regions. What ancient cities, if any, still exist? What physical features, such as mountains, lakes, and rivers, are still there today? Teachers may point out that Lake Texcoco would be drained by the invading Spanish.

Activities for Other Topics

At the beginning of this unit, students may be given outline maps of the world. With a red crayon or pencil, they outline the areas of the world they have previously studied. Students next use purple crayons or pencils to outline the land masses known as North America and South America. This is a good time for teachers to explain to students that what we call Central America is a geological extension of North America. After they have studied about early migration and the Ice Age formation of the Bering land bridge, students trace on their maps the migration routes theorized by anthropologists and historians. Using light blue or turquoise crayons, they color the area of glacial spread that occurred between 33,000 and 10,000 B.C. Some Ice Age glaciers are believed to have drawn from the ocean's water, leaving a land bridge called Beringia, now in the Bering Strait. In the legends for their maps, students should note the presumed dates of the earliest migration (20,000-32,000 years ago).

Prior to studying the hunting-gathering societies of the ancient Americas, students brainstorm what they recall about hunters and gatherers from the sixth grade. What constituted the diet of hunting-gathering people? What animals and plants are or were indigenous to the students' own area? Could people of today survive as hunters and gatherers in your locality? Why or why not?

After students have studied the life-styles of sedentary peoples in the Americas, student partners determine the steps necessary for ancient Meso-Americans to process maize into flat cakes. Students will need to think inferentially and draw from the textbook or other readings in order to identify four or five likely steps. During a portion of a class period, students may sketch diagrams or flow charts to outline each phase. Though intended for somewhat younger students, Alik's *Corn Is Maize: The Gift of the Indians* contains pertinent information and may be used as a classroom resource (see "Resources for the Sample Topic").

Students study copies of the altitudinal zones chart in the map packet that accompanies this course model. They may use textbooks or other resources to determine the elevations of the territories occupied by the Mayan, Incan, and Aztec civilizations. What effect did elevation have on the climate or ways of life? Copies of three books by Pamela Odijk are useful when students consider the effect of climate on food, clothing, shelter, and medicine: *The Aztecs*, pages 10-21; *The Incas*, pages 11-19; and *The Mayas*, pages 10-18.

The books are illustrated with colorful photographs and are so well organized that students have little trouble in locating specific information. Students can collaborate to develop classroom charts on the correlation between geography and daily life. Students may incorporate the elevation data on the outline maps started in "Beginning the Topic." The geographic background information in Appendix 2 may also be useful for this activity.

Mayan life and religion centered on growing maize and using it for food. Artifacts and Spanish written records indicate that the fields were worked by Mayan men and that preparing the maize for food was the responsibility of women.

Students learn of this separation of responsibilities when they study the agriculture-based economy of the Mayans and then develop lists of tasks that they believe Mayan men and women would have needed to complete to maintain this economy. The raising and use of maize is given as a sample task. The class may be divided for this brief activity, each half taking either the male or female perspective. Students are given time to work independently, to pool their ideas, and to report their lists to the class. Tasks should be listed in the order in which they would be done.

Students' lists for Mayan women could include the soaking, grinding, cooking, washing, patting, and frying of the maize and preparing maize porridge. Lists for Mayan men might mention raising and preparing fields and planting, tending, harvesting, loading, and transporting crops.

Students next learn of some of the geographic hardships that the Mayans faced. An average rainfall of 120 inches (304.8 centimetres) per year meant restricted, hurried planting and harvesting seasons. Tropical animals and insects were constant problems, and fields were quickly overrun by jungle growth. Overfarming resulted in five- to ten-year periods during which some fields lay fallow before they could be replanted. The lack

of wheeled vehicles or farm animals meant that farmers carried loads on their backs. Besides maize, the Mayans also raised cacao, tobacco, and cotton.

In addition to preparing food, Mayan women were responsible for spinning yarn, weaving textiles and embroidering them, raising poultry, marketing (including buying and selling), and caring for the children. During crucial times, women assisted the men with fieldwork. They were also involved in the processing and preparation of crops besides maize.

Drawing from their knowledge of U.S. and world history, students consider how the Mayan economy and the responsibilities of men and women compare with those of other ancient societies. How does the Mayan division of labor compare with that of nineteenth-century prairie life in the United States? With that of California today?

If the United States were to be plunged into an extreme energy crisis that resulted in the long-term curtailment of gas and electrical appliances and of our fuel-based economy in general, would people be able to survive? Why or why not? What would citizens need in order to function? How might Mayan women regard the modern appliances, home fixtures, and shopping malls of today? How might Mayan men regard large corporate farms and contemporary farming technologies? Such questions can be the basis for journal entries, quick-writing activities, or reflective essays.

When studying each of the three major civilizations, students diagram the social structure of the society.

A pyramid or other figure may be used to depict the distribution of the population. The diagrams can lead to questions about social institutions, such as slavery. Students may report on these issues. For example, was it possible to move from one class to the other, or did one's class at birth determine social status for life? This activity may be applied to other units of study as well.

In his book *The Amazing Potato*, Milton Meltzer states that the potato was perhaps the most important gift Peru gave to the world. Developed from wild tubers, this hybrid resulting from natural cross-fertilization perhaps wended its way through centuries, continents, and oceans to become one of the most historically important foods. When students study the agriculture of the Incas, they can learn how the potato became a staple food of mountain dwellers and farmers, who selected and planted the best types. How did the potato help to solve one of the problems of life in high elevations? (Hint: The varieties developed by farmers were frost-hardy.)

One of the most primitive agricultural tools is the foot plow, still used in modern-day Bolivia by some people. With this tool, Incan farmers drove the slender, spadelike end of the stick down into the soil with a thrust of the foot; the handle was pressed downward, turning up the soil. Clubs and hoes were used by Incan women to break up big clods of

earth into small pieces. The foot plow was also used by Incan farmers for planting maize. (See the drawing on page 20 of Meltzer's book, which depicts maize planters in Peru from the time of the Spanish conquest.) Teachers may read the introduction to *The Amazing Potato* before beginning this activity. Why would such a tool still be used today by Peruvian farmers?

The study of the Incan cultivation of the potato is a convenient connection to the discussion of natural cross-fertilization and the work of Gregor Mendel and, therefore, correlates well with science lessons.

Students should examine the existence or absence of human sacrifice in the civilizations studied. For example, why did the Aztecs sacrifice human beings? How did this belief influence the Aztecs' wars against neighboring peoples? Some historians believe that Aztec mythology offers a clue to understanding this inhumane practice. The Aztecs believed that their god of war and the sun had led them to Tenochtitlan and made them a great people. In reciprocation, the Aztecs thought they must help him. At sunset, the sun god was believed to enter a dark world through which he had to fight his way; only if he won his fight would he rise again to bring the morning. If the sun never rose again, earthquakes would destroy the earth. According to historians, the Aztecs tried to keep the sun god well fed for the nightly struggle. But the sun god did not eat ordinary fare; he ate human hearts. Fearing that without hearts to eat the sun god would lose his fight, the Aztecs sacrificed human beings; in a special sacrificial ritual, the heart of the victim was raised as an offering to the sun god.

In wars against their neighbors, the Aztecs captured prisoners, who were used as sacrifices to the sun god. Without wars, there would be no human sacrifices; without sacrifices, the Aztecs believed, there would be no sun.

Nobel prize-winning poet Octavio Paz has explained the significance of these beliefs more fully. Teachers are referred to the section "Rejuvenation Through Blood" in Appendix 2 for additional information. (Students should understand that the practice of human sacrifice was not unique to the Aztecs; the early Phoenicians, Celts, and other societies are known to have practiced it.)

The teacher explains that the Aztecs' wars against their neighbors and their use of captives as sacrifices will be important for students to remember when they reach the unit on the European Renaissance. In addition to learning of the brutal and greedy conquistadors, students will see how the Aztecs' neighbors united with fewer than 500 Spanish invaders to form an army of 7,000 to march on Tenochtitlan. The result was the conflagration of the capital, the annihilation of an entire culture and people, and the end of an era—one of the bloodiest and most devastating chapters in the story of humankind.

Extended and Correlated Activities

In any discussion of Aztec art, it is important to point out that most artifacts now considered art were created for religious purposes: Masks were placed on the dead, elaborate knives were used in religious ceremonies, and paintings were used to teach religious beliefs. Is any twentieth-century art created for these purposes or functions in the United States? How does the Aztec use of its "art" compare with that of cultures studied in the sixth grade?

Especially interesting Aztec artifacts are the codices. The Aztecs used these manuscripts, which they illustrated with complex designs, to record their rituals and legends. Students can compare the style used in reproductions of the codices (See *Voyages of Discovery: Time Frame A.D. 1400-1500*, page 157; *The Aztecs*, by Pamela Odijk, page 31) to the illustrations drawn by Deborah Nourse Lattimore in her book *The Flame of Peace* (see "Resources for the Sample Topic"). The illustrator has used her own style to interpret or recreate Aztec drawings and designs. For example, the illustrator draws eyes differently from the way the Aztec artisan did.

Students may wish to re-create some Aztec drawings using their own styles and color schemes. They can then write or tell about what they learned regarding the Aztecs' use of line, color, shape, space, value, texture, and pattern. What shapes are most often repeated? How are textural qualities represented? Can we tell what materials were used in the headdresses by the way they are drawn? Some students may be interested in creating their own symbolic characters to represent natural forces (rain, wind, fire, and so forth) or to represent issues that concern them (such as the depletion of the ozone layer, air pollution, or the need for environmental cooperation). They may gain an understanding of how difficult it is to interpret symbols from another culture and how creative and imaginative an artist must be to put an abstract concept into a visual form. Teachers may also use this activity to have students focus on Aztec values--and to consider how those values might be inferred from the artworks.

Limestone pyramids were at the heart of Mayan cities. The logistical problem of moving stones and constructing these impressive ancient structures is among the issues that historians and archaeologists of the Mayan civilization still find interesting. Students can explore this question in an activity that correlates history and mathematics.

Pictures of Mayan pyramids may be examined by selected students (see Odijk's *The Mayas*, page 39) to estimate the size of one limestone block. Is it as big as the teacher's desk? How much would it weigh? To estimate the weight of one block, students may weigh a brick, which has a density ratio somewhat similar to that of limestone. After determining the weight and size of the brick and estimating the size of the block, students estimate the weight of one block.

How many men would it have taken to lift the stone? Since relatively fit adults can lift approximately 125 pounds, students can determine the answer by dividing the weight of one block by 125.

How did the men move the stone? To answer this question, students are required to think more creatively. They may, for example, experiment with rolling a small book across pencils--a mock form of rolling a stone across logs. (If students use three pencils and rotate them toward the front of the book, the book can be rolled a long distance.) The Maya possessed a more sophisticated grasp of physics (e.g., stress and strain factors) than the average seventh grader; nevertheless, the problem can be fascinating for youngsters and fuels their interests in both history and applied mathematics.

Later in the year, as students study the Spanish conquest of the Aztecs, they consider the long-range historical impact of such diseases as smallpox and bubonic plague. What was the origin of these diseases? Despite improvements in medicine, epidemics are still with us: Some varieties of influenza cross boundaries and become epidemic, with varying degrees of devastation; AIDS continues to be a major health problem with both medical and moral ramifications. Students may research the nature of various epidemics, their places of origination, and their means of transmission and reflect on the historical or contemporary consequences.

Both the Aztec and Mayan cultures had legends of a mystical drum that came from the sky to help the people. Its effect was magical, and the Aztecs thought that the drum possessed supernatural powers.

The Aztecs made many drums from hollowed logs. The term *huehueltl* refers to any large, upright drum that is footed (i.e., legs are cut from the body of the drum). A jaguar skin covered the single drum head and could be tightened or loosened to raise or lower the pitch. Players used their fingers instead of mallets.

Other Aztec instruments include flutes carved from bones, clay whistles, rattles, bells, and other drums. Although the Aztecs used music for household entertainment, much of their music was communal and religious.

Further information regarding Aztec music and its social importance may be found on page 36 of Pamela Odijk's *The Aztecs*. Interested students may report on Aztec music and compare the *teponaztli* (another type of holy drum) with the talking drums or slit-log drums of Africa. (See Jacqueline Dineen's *The Aztecs*, page 33, for good pictures of Aztec instruments.)

Although it is believed that Aztec music was not written down, modern composers have evoked the ancient culture through contemporary counterparts of the original instruments. For example, the second symphony (*Sinfon'a indio*), by the Mexican composer Carlos Chavez (1899-1978), makes notable use of rattles, drums, and flutes to suggest the glory of ancient indigenous cultures.

In music classes, students may experiment with tunable percussion instruments and log drums. Since Aztec music is believed by some musicologists to have been pentatonic,

tunable hand drums may be pitched according to a pentatonic scale. How is the huehuettl similar to and different from the modern timpanum or kettledrum? Of what is the head of a timpanum made? Since the materials used in making instruments have a great deal to do with their timbres, how did geographic or natural features play a part in predetermining the sound of Aztec music?

Little is known of Incan music, which was not written down but passed from person to person. Ethnomusicologists believe that some remnants of it remain in present-day Peruvian music, despite European influences.

Mayan music is slightly better known, partly because some songs were written down in the collection *The Books of Chilam Balam*. Mayan artifacts record the presence of drums, rattles, and long horns. The presence of certain musical instruments in South America, such as the *huayra-pu hura* (pan-pipes), has led some musicologists to consider the possibility of early exchanges between China, the Malay Archipelago, the Pacific islands, and ancient America. Teachers interested in this topic are referred to Curt Sachs's *The History of Musical Instruments*, listed in the "Visual and Performing Arts Resources."

Resources for the Sample Topic

The following resources represent only a few of the many possible materials and sources that are available. Double asterisks (**) indicate books that are essential for full development of the unit; single asterisks (*) indicate works that are deemed important for successful coverage of the unit. For further selections, teachers should consult other bibliographies such as *Literature for History-Social Science, Kindergarten Through Grade Eight* (California Department of Education, 1991).

Aliki. *Corn Is Maize: The Gift of the Indians*. New York: Harper, 1976. In this book, students learn how Indian farmers thousands of years ago found and nourished a wild grass plant; made it an important part of their lives; and learned the best ways to grow, store, and use its fat yellow kernels. Intended for younger readers, this book is also appreciated by many seventh graders.

***The Aztecs*. INDIANS OF NORTH AMERICA series. New York: Chelsea House, 1989. Though written somewhat above the reading level of many seventh graders, this book and *The Maya*, a companion volume, are rich with written and visual information. Students can use the two books for reference and research; teachers will value them for background reading.

*Bierhorst, John. *The Monkey's Haircut and Other Stories Told by the Maya*. New York: Morrow, 1986. John Bierhorst is one of the notable folklorists specializing in indigenous American cultures. The collection is useful when beginning the study of the Mayan civilization.

**Dineen, Jacqueline. *The Aztecs*. WORLDS OF THE PAST series. New York: New Discovery Books, 1992. This student reference book is illustrated with high-quality, full-color photographs, maps, and diagrams. It is especially useful for the research activity described in "Culminating the Topic" in this unit. A companion volume, *The Incas*, by Sarita Kendall, is from the same series and is also recommended.

*Fisher, Leonard Everett. *Pyramid of the Sun--Pyramid of the Moon*. New York: Macmillan, 1988. The Toltec and Aztec cultures are carefully described and enhanced by memorable illustrations, making this book a valuable resource for classroom use. Some teachers read the book (or excerpts) aloud to their classes.

Garcilaso, de la Vega. *Royal Commentaries of the Incas*. Austin: University of Texas Press, 1966. Garcilaso was born in Peru in 1539. His mother was an Inca; his father, a conquistador. Throughout his life, Garcilaso assembled legends and history of the Incas and wrote descriptions of Spanish conquerors. His extensive work was completed in 1612. Part 1, the legends, is useful for this unit; Part 2 complements topics in Unit X.

Garrett, Wilbur E. "La Ruta Maya," *National Geographic* (October, 1989), pp. 424-479. Five nations are collaborating to establish the Maya Route to showcase their shared

cultural, historical, and environmental heritage. Easier access to Mayan ruins is one of the goals in the building of this route. This article tells of the ruins, the traditional crafts, the endangered tropical forests, and the barrier reefs along the way.

****Gifford, Douglas.** *Warriors, Gods and Spirits from Central and South American Mythology*. Schocken, 1983. John Sibbick's illustrations for this folktale collection appeal to middle school students. Stories represent the cultures of the Aztecs, Toltecs, Mayas, Incas, and others. The author includes helpful historical background.

Guyatt, John. *Ancient America*. St. Paul, Minn.: Greenhaven Press, 1980. This booklet is a resource for students. It has a number of very good excerpts from primary sources at the end and is also well supplemented with black-and-white photographs. The conquests are featured as well as the civilizations. It is available from social studies supply houses.

****Kendall, Sarita.** *The Incas*. *WORLDS OF THE PAST* series. New York: New Discovery Books, 1992. High-quality, full-color photographs and a topical arrangement make this in-depth resource appealing to students. Over 60 pages long, it includes a time line and a glossary. See also the entry for Jacqueline Dineen's *The Aztecs*.

***Lattimore, Deborah Nourse.** *The Flame of Peace*. New York: Harper Junior Books, 1987. In retelling this authentic Aztec tale, Lattimore reproduces the icons and designs of this ancient culture. The story is based on the "Alliance of Cities" during the time of Itzcoatl. See also the author's *Why There Is No Arguing in Heaven: A Mayan Myth*. (New York: Harper Junior Books, 1989), which is an effective complement to the study of this civilization.

McDowell, Bart. "The Aztecs," *National Geographic* (December, 1980), pp. 704-751. In this well-illustrated article, McDowell studies the nature of the modern and ancient Aztec peoples. Many of the ambivalences of today's Aztec people come to light through historical interpretation. See also McDowell's "Mexico's Window on the Past," *National Geographic* (October, 1968), pp. 493-521, which describes Mexico City's National Museum of Anthropology and its holdings.

McIntyre, Loren. "The Lost Empire of the Incas," *National Geographic* (December, 1973), pp. 729-787. The culture of the Incas is the subject of this article. The highlight of the article is a pictorial chronicle of the Incas taken from a 1615 treatise by Felipe Guaman Poma, with drawings done by Poma's wife.

****Odijk, Pamela.** *The Incas*. *THE ANCIENT WORLD* series. Englewood Cliffs, N.J.: Silver Burdett, 1989. Slim and colorful, this is an essential reference work for students. Companion volumes, *The Aztecs* and *The Mayas*, are just as strongly recommended. The color photographs, reproductions of artifacts, topical organization, and multifaceted presentation are appealing to students.

Samora, Julian, and Patricia Vandel Somon. *A History of the Mexican-American People*. Notre Dame, Ind.: University of Notre Dame Press, 1977. Available through libraries or

in paperback through bookstores, this volume is a good resource for background information on such topics as Bartolome de las Casas and the mestizos.

Skidmore, Thomas E., and Peter Smith. *Modern Latin America* (Second edition). New York: Oxford University Press, 1989. Portions of this book deal with Spanish settlements, Roman Catholicism in Spanish America, the mercantilist system, and the devastating impact of the Spanish conquest on surviving Indian culture.

****Steele, Philip.** *The Incas and Machu Picchu*. New York: Macmillan, Dillon, 1993. One of the volumes in the publisher's *HIDDEN WORLD* series, this student resource contains helpful photographs and historical drawings and is helpful for the sample topic's research project.

Stuart, George E. "City of Kings and Commoners: Copan," *National Geographic* (October, 1989), pp. 488-505. Stuart tells of this ancient Mayan city and its archaeological wonders. The city, located in Honduras, is now under restoration. This article examines both the restoration efforts and the artifacts that archaeologists have uncovered.

VOICES FROM WORLD HISTORY: Level F. Austin, Tex.: Steck-Vaughn, 1991. This classroom resource contains an excerpt from Garcilaso de la Vega's Royal Commentaries of the Incas. Garcilaso treasured the myths of the Incas, and the excerpt in this resource records an authentic legend as told to him by an elder Inca. Refer to pages 110-113 of the book for the excerpt.

****What Do We Know About the Aztecs?** *WHAT DO WE KNOW ABOUT* series. New York: Bedrick, 1992. In preparation as this course model goes to press, this book follows the format of previous titles in this series. Students find the *WHAT DO WE KNOW ABOUT* books to be good resources for research and independent projects. The emphasis is on the everyday lives of people.

*Wisniewski, David. *Rain Player*. New York: Clarion, 1991. The ancient Maya believed that the future was divinely decreed and could not be changed. This story is a dramatic tale of a boy who challenged this belief by taking matters into his own hands. While some artistic license has been taken by the author in reconstructing this ancient story, his afterword provides essential historical background. Students can reflect on how the boy's attitude is closer to contemporary Western world views in its emphasis on self-determination.

*Wood, Marian. *Ancient America. CULTURAL ATLAS FOR YOUNG PEOPLE* series. New York: Facts on File, 1989. Written for young readers, this book provides a useful discussion of pre-Columbian peoples in both North and South America. It includes the great empires of the Aztecs and the Incas.

****Wood, Tim.** *The Aztecs. SEE THROUGH HISTORY* series. New York: Viking, 1992. This generously illustrated volume is perhaps the most attractive and appealing resource

for students. Especially noteworthy are the four transparency overlays accompanying full-page illustrations. Numerous aspects of Aztec life and culture are described.

General Resources

Adams, Richard E. W. "Archaeologists Explore Guatemala's Lost City of the Maya: Rio Azul," *National Geographic* (April, 1986), pp. 420-452. An untouched tomb found at Rio Azul is the location of new discoveries by archaeologists who work at the site. Two follow-up articles in the same issue take up the topics of the ethics of "tomb robbing" and of maintaining private collections of artifacts recovered from tombs.

Alva, Walter. "Discovering the New World's Richest Unlooted Tomb," *National Geographic* (October, 1988), pp. 510-549. Over 17 centuries old, this Peruvian Moche tomb has yielded the richest treasure yet to be found in the Americas. Moche art and technology rivaled that of the Maya. By examining the tomb's contents and the placement of its dead, students can decipher clues about Moche technology. A follow-up article in the same issue, "Unraveling the Mystery of the Warrior-Priest," describes the iconography of power in the Moche culture. The author's "The Moche of Ancient Peru: New Tomb of Royal Splendor" (*National Geographic*, June, 1990, pp. 2-16) tells of a mud-brick pyramid complex in northern Peru that has yielded a wealth of gold and silver.

Anawalt, Patricia Rieff, and Frances F. Berdan. "The Codex Mendoza," *Scientific American* (June, 1992), pages 71-79. The authors discuss the magnificent Aztec picture book that was compiled at the instigation of the Spanish conquerors. The codex constitutes an eyewitness account of a rapidly vanishing civilization. A map showing the expanding boundaries of the empire is particularly helpful. This article is recommended for reading by teachers for background information.

Athey, Lois. *Latin America: History, Culture and Geography. THE REGIONAL STUDIES* series. New York: Globe Book Company, 1987. This paperback book includes two chapters that are very useful for seventh grade studies. One discusses the pre-Columbian civilizations; the second looks at the European conquests in Central and South America.

Bateman, Penny. *Aztecs and Incas, A.D. 1300-1532. GREAT CIVILIZATIONS* series. New York: Franklin Watts, 1988. Colorful illustrations combine with text to survey the accomplishments of the Aztec and Inca civilizations of Mexico and Peru.

*Berdan, Frances L. *The Aztecs of Central Mexico*. New York: Holt, Rinehart and Winston, 1982. This is a case study of the people who dominated a vast area of what is now Mexico by the time the conquistadors arrived in A.D. 1519 but who had humble, nomadic beginnings. Berdan's vivid and detailed reconstruction of Aztec life and culture is based on a variety of documents. It is for teachers' background reading.

Boorstin, Daniel J. *The Discoverers: A History of Man's Search for His World and Himself*. New York: Random House, 1983. Several chapters of Boorstin's book examine

the relationship among events during the period of exploration. Some interesting theories are presented to explain the sequence of discoveries and the nations that initiated them. This book is suggested for teachers.

Brotherston, Gordon. *Image of the New World--The American Continent Portrayed in Native Texts*. New York: Thames and Hudson, 1979. This teachers' resource includes 118 selections from Native American literature and documentary texts.

The Buried Mirror: Reflections on Spain and the New World. Videotape series. Text written and narrated by Carlos Fuentes. Chicago: Films Incorporated Video, 1993. Available in both English and Spanish versions, this series of five 59-minute programs explores the origins of the Spanish elements in Latin America, the lives of American peoples prior to 1492, colonialism, revolution, and the impact of history on today's world. The series was intended for adult viewers and is recommended for teachers.

Casson, Lionel, and others. *Mysteries of the Past*. New York: American Heritage Publishing, 1977. Embellished with many black-and-white pictures, this resource includes an essay titled "What Caused the Collapse of the Maya?"

Chronicle of the World. Edited by Jerome Burne. London: Longman, 1989. Important, sometimes simultaneous events in history are chronologically arranged and described in a "new article" format. Although written for adults, this noteworthy compilation is fascinating to students as well.

The Conquest of Mexico. Amawalk, N.Y.: Jackdaw Publications, n.d. This is a portfolio of primary source documents related to the Spanish conquests in Mexico. It is available from the publisher, P.O. Box 503, Amawalk, NY 10501, or from social studies supply houses.

**Coupe, Sheena, and Barbara Scanlan. *History Begins*. Melbourne, Australia: Longman, 1985. Pages 223-236 of this student text contain material relating to the Olmec and Mayan civilizations. A companion text, *Threads of Time*, contains material relating to the Incas and the Spanish conquest. Seventh graders enjoy these materials, and such features as "How Do We Know?" and "Time to Understand" suggest supplementary projects. Teachers will want to have copies of both books from which to select material throughout the year.

Donnan, Christopher B. "Master Works of Art Reveal a Remarkable Pre-Inca World," *National Geographic* (June, 1990), pp. 16-33. Archaeologist Donnan examines the artistry and technology of the pyramids, irrigation canals, metal crafts, and pottery of the ancient Moche people of Peru.

*Durin, Gloria. *Malinche: Slave Princess of Cortez*. Hamden, Conn.: Linnet Books, 1993. The figure of Malinche is a curious one today--half legend, half history. Was she a traitor, or was she betrayed by her people? Durin relies on historical and archaeological evidence to develop an informed fiction-on-fact portrayal of one of history's most

memorable enigmas. Advanced seventh graders may enjoy the book, although it is better read by somewhat older adolescents. It is suggested for teachers' reading as well.

Early America Civilizations (Second edition) Film/video. Northbrook, Ill.: Coronet Film and Video, 1992. Telephone (800) 777-8100, ext. 5025. A basis for comparing great civilizations on other continents can be made by viewing the ruins of ancient Indian cities in the Andes Mountains of South America and on the plateaus and lowlands of Mexico and Central America. This video/film pictures the history and daily life of the Olmecs, Mayas, Toltecs, Aztecs, and Incas and portrays both their achievements and their vulnerability to conquest. Descendants of the Mayas and Incas are noted, links between the past and the present. The film/video is about 24 minutes long.

The European Emergence: TimeFrame A.D. 1500-1600. Alexandria, Va.: Time-Life Books, 1989. Chapter two in this volume tells of the Spanish conquests of Mexico and Peru.

**Faces: The Magazine About People*. Vol. 6 (June, 1990). An array of articles relating to ancient Mexico includes student-oriented compositions on the Aztecs, the Olmecs, Teotihuacán, religion, folktales, games, and activities. Faces is one of three history magazines Cobblestone publishes for use in schools. For ordering information, contact Cobblestone Publishing, 30 Grove Street, Peterborough, NH 03458; phone (603) 924-7209.

Fagan, Brian M. *Kingdoms of Gold, Kingdoms of Jade: The Americas Before Columbus*. New York: Thames and Hudson, 1991. Well researched and attractively presented, this specialized work is noted for its wide appeal to adult readers. It is suggested for reading by teachers.

Farb, Peter. *Man's Rise to Civilization as Shown by the Indians of North America from Primeval Times to the Coming of the Industrial State*. New York: E. P. Dutton, 1968. Farb examines the sources of power and authority of the ancient civilization of the Aztecs and relates them to the rapid decline in the civilization.

Fasquelle, Ricardo Agurcia. "A Royal Mayan Tomb Discovered," *National Geographic* (October, 1989), pp. 480-487. In the ancient Mayan city of Copan in Honduras, the first royal tomb to be discovered in a century was found. Drawings and photographs depict its archaeological wealth.

Gill, Sam. *Native American Religions*. Belmont, Calif.: Wadsworth, 1982. Busy teachers will appreciate this book for its accessible presentation of scholarly material.

Grun, Bernard. *The Timetables of History: A Horizontal Linkage of People and Events*. New York: Simon and Schuster, Touchstone, 1975. This is an invaluable resource for cross-referencing dates that relate to the following topics: history and politics; literature and theater; religion, philosophy, and learning; visual arts; music; science, technology,

and growth; and daily life. Students can refer to this book when making their own time lines.

Hammed, Norman. "Unearthing the Oldest Known Maya," *National Geographic* (July, 1982), pp. 126-140. Hammed has written of findings at Cull, a ceremonial center in Belize, that pushed back the initial life of the Mayan culture to 2400 B.C.
Herring, Hubert. *History of Latin America* (Third edition). New York: McGraw-Hill/Macmillan, 1968. This is a standard college textbook and is useful for teachers interested in reviewing or strengthening their own understanding of the topic.

*Holmgren, Virginia. "Machu Picchu: Lost City of the Incas," *Calliope World History for Young People* (May/June, 1991), no pp. Archaeology, geography, and history merge in this article to pique students' curiosities. Photocopying is possible for classroom use. Back issues of the magazine are available from Cobblestone Publishing, 30 Grove Street, Peterborough, NH 03458, (603) 924-7209.

**Lathrop, Jacqueline Phillips. *Ancient Mexico: Cultural Traditions in the Land of the Feathered Serpent* (Fourth edition). Dubuque, Iowa: Kendall/Hunt Publishing, 1991. This is a history of cultural developments in Mexico from prehistory to the present day. Well illustrated, scholarly, yet easy for teachers to read, Lathrop's book highlights the major artistic and intellectual accomplishments in centers of growth throughout Mexico. It provides a general framework for teachers who have little or no prior knowledge of Mexico's early history.

Leonard, Jonathan Norton. *Ancient America. GREAT AGES OF MAN* series. New York: Time, Inc., 1967. The culture and achievements of the ancient Olmec, Aztec, Mayan, Incan, and other pre-Columbian American civilizations are described in this volume. The Spanish conquests are discussed in detail. This well-illustrated volume depicts the ancient world and its heritage that survives today in crafts and ceremonies. Consult libraries for copies.

Long, Michael E. "Enduring Echoes of Peru's Past," *National Geographic* (June, 1990), pp. 34-49. Long and his photographer, Nathan Benn, traveled along Peru's coast to find remnants of the ancient past in today's crafts, ceremonies, and daily activities.

Mayan Folktales: *Folklore from Lake Atitlan, Guatemala*. Translated and edited by James D. Sexton. New York: Doubleday, Anchor, 1992. The lively Mayan myths are not unlike tales told in our time. This panorama of stories reflects tragic, comic, ribald, profound, and mysterious aspects of the Mayan world. A commendable number of stories reinforce such universal values as honesty, industry, sharp-wittedness, sharing, and fairness. This book is listed for adult readers.

Meltzer, Milton. *The Amazing Potato: A Story in Which the Incas, Conquistadors, Marie Antoinette, Thomas Jefferson, Wars, Famines, Immigrants, and French Fries All Play a Part*. New York: HarperCollins, 1992. After reading this book, no student will doubt the historical efficacy of the popular potato and other comestibles. Chapter 2, "A Gift of the

Inca People," relates specifically to this unit. Meltzer, a respected writer of history for young readers, has an engaging style. See also Meltzer's book *Gold* (HarperCollins, 1993).

Moctezuma, Eduardo Matos. "New Finds in the Great Temple," *National Geographic* (December, 1980), pp. 766-775. Called the Crown of Tenochtitlan, the Great Temple, or Templo Mayor, was a symbol of Aztec accomplishments. Drawings and photographs bring this culture to life for students.

Montes, Augusto F. "The Building of Tenochtitlan," *National Geographic* (December, 1980), pp. 752-765. This article chronicles the building of the ancient Aztec city of Tenochtitlan from the time of its prophecy to its completion. Drawings and descriptions of six of the major gods in the Aztec pantheon highlight the article.

O'Dell, Scott. *The Amethyst Ring*. Boston: Houghton Mifflin, 1983. This novel is listed here for those teachers who prefer to correlate its use with this unit. See also O'Dell's *The Feathered Serpent*.

Sabloff, Jeremy. *The Cities of Ancient Mexico: Reconstructing a Lost World*. New York: Thames and Hudson, 1989. Sabloff describes the life and times in the great ancient cities of Mexico.

*Schele, Linda, and David Freidel. *A Forest of Kings: The Untold Story of the Ancient Maya*. New York: William Morrow, 1990. This history of the "New World" as it existed before the European invasion tells the story of the Mayan civilization up to its destruction by the Spanish. Recommended to teachers for background reading, the work is well illustrated, well researched, and consistently interesting.

Snell, Tee Loftin. *The Wild Shores: America's Beginnings*. Washington, D.C.: National Geographic Society, 1974. Spanish conquests and English exploration and settlement are described in this well-illustrated book. Several early maps may be of special interest to students.

Stuart, Gene S. *America's Ancient Cities*. Washington, D.C.: National Geographic Society, 1988. This book contains a chapter titled "A Golden Age in Mesoamerica." It is superbly embellished with photographs and drawings depicting Mesoamerican antiquity. A second chapter deals with trade among the Mesoamerican cities.

**Swanson, Earl H.; Warwick Bray; and Ian Farrington. *The Ancient Americas. THE MAKING OF THE PAST* series. New York: Bedrick, 1992. Though written for slightly older readers, this book will be welcomed by seventh graders as a resource for research. Borrowing from archaeology and other social sciences, this fresh view of history is illustrated with many full-color photographs, diagrams, line drawings, and reconstructions. Authoritative and up-to-date, it conveys the excitement of recent discoveries about American civilizations.

Voyages of Discovery, TimeFrame A.D. 1400-1500. Alexandria, Va.: Time-Life Books, 1989. This book is the source for the first of the "extended activities." This and other volumes in the TIMEFRAME series are recommended for both teachers and students.

Wilkerson, Jeffrey K. "Man's Eighty Centuries in Veracruz," *National Geographic* (August, 1980), pp. 203-232. Wilkerson documents his two decades of work studying the chronology of human habitation on Mexico's Gulf Coast.

Visual and Performing Arts Resources

ART THROUGH THE CENTURIES, The Americas. Sandak, 70 Lincoln Street, Boston, MA 02111, (617) 423-3990. Sandak has selected 16 color slides from its collection to create a set that is coordinated with this unit. The slides depict art and artifacts from the Olmec, Mayan, Moche, Aztec, and Incan cultures. Depicted are ceramic pottery and statues, a mosaic mask, the Eight Deer Codex, gold figurines, an Incan tunic, and Machu Picchu.

Aztec Cosmos. Madison, Wis.: Knowledge Unlimited, Inc., n.d. This is a color poster of the Aztec calendar with a teacher's guide. For ordering information, phone (608) 836-6660.

Before Cortes: Sculpture of Middle America. Sandak Color Slides, 70 Lincoln St., Boston, MA 02111, (617) 423-3990. This set of 50 slides reflects the spectacular artistic production of the region from central Mexico to Panama and the West Indies, spanning nearly 3,000 years. The objects represent achievements from the early Olmec civilization up to the Aztec Empire that flourished at the time of the Spanish conquest.

The Civilization of the Ancient Maya and Its Collapse. Alarion Press, P.O. Box 1882, Boulder, CO 80306. This filmstrip program gives an overview of Mayan civilization during its late classical period and an analysis of its eventual collapse. Examined are Mayan architecture at Uaxactun, Tikal, and Bonampak, the social and political organization of these cities, and the relationship between the Mayas and their environment.

Claudia's Caravan, P.O. Box 1582, Alameda, CA 94501, (501) 521-7871. This supplier sells authentic musical instruments from South America, Africa, and other areas of the world. A catalog is available on request. *Land of the Incas,* an audiocassette, features contemporary music based on traditional village melodies.

The Codex Nuttall. Edited by Zelia Nuttall. New York: Dover Publications, n.d. This full-color reproduction of a very rare and beautiful picture manuscript from ancient Mexico (Mixtec) consists of more than 80 pages of clear, glyphlike drawings. The introduction discusses the style, iconography, history, and interpretation of Mixtec codices.

Early Civilizations of the Americas. Madison, Wis.: Knowledge Unlimited, 1992. The origins, history, and important contributions of these civilizations are explored. The package includes one filmstrip, one audiocassette, and one illustrated guide.

Ethnic Arts and Facts Educational Culture Kits. P.O. Box 20550, Oakland, CA 94620. Kits of traditional artifacts, such as Peruvian and Guatemalan musical instruments, dolls, fabric, and baskets, are available from this firm.

EXPLORER series of recordings. Elektra Nonesuch, 75 Rockefeller Plaza, New York, NY 10019, various dates. For nearly two decades the *EXPLORER* series of recordings featured folk music from around the world that is not widely heard in the United States. Though most of the old recordings are out of print, Nonesuch is beginning to reissue the recordings on compact discs. Contact Carol Yapple for purchasing information.

The History of the Incas. Alarion Press, P.O. Box 1882, Boulder, CO 80306. This filmstrip program briefly summarizes the history of the Inca Empire and then examines its economics, organizational and engineering feats, political structure, beliefs, public works, and architecture.

The Incas Remembered. Madison, Wis.: Knowledge Unlimited, 1986. The wonders and mysteries of the Incan civilization are explored.

Jessup, Lynne. *World Music: A Source Book for Teaching* (Revised edition). Danbury, Conn.: World Music Press, 1993. This is an annotated resource guide to books, recordings, and films dealing with the musical traditions of a wide variety of cultures. It focuses on authentic, in-depth material that is nontechnical. Though somewhat dated, its list of resources and suppliers remains valuable. For purchasing information, see the entry in this section for World Music Press.

Latin American Art. Sandak Color Slides, 70 Lincoln Street, Boston, MA 02111, (617) 423-3996. Pre-Columbian works by the Olmec, Aztec, and Mayan cultures are represented in this 25-slide set. Also included are contemporary and later works by Venezuelan, Uruguayan, Mexican, and other artists.

The Mayan Mystery. Madison, Wis.: Knowledge Unlimited, 1986. This videotape (18 minutes long) provides an overview of the areas in which the Mayan Empire grew, flourished, and died. For ordering information, phone (608) 836-6660.

Reid, James W. *Textile Masterpieces of Ancient Peru.* New York: Dover Publications, n.d. A rich selection of textiles depicted in 77 full-color photographs reveals an unerring sense of design, sophisticated composition, and close ties with nature. The informative text discusses the historic, mythological, and aesthetic importance of textiles as well as the religious, political, sociological, and artistic roles of the motifs.

Sachs, Curt. *The History of Musical Instruments.* New York: W. W. Norton, 1940. Sachs's work continues to be a mainstay in this area of research. Chapters cover major

time periods, and examples connect a variety of cultures. Not for use by seventh graders, the book should be sought through public libraries by teachers of music and history. Also available by the same author is *The Rise of Music in the Ancient World, East and West*, and *World History of the Dance*.

Shorewood Fine Art Reproductions, Inc., 27 Glen Road, Sandy Hook, CT 06482, (203) 426-8100. Full-color reproductions, 22" x 28" (55.9 x 71.1 centimetres), mounted on cardboard or unmounted, laminated or unlaminated, are available from this source. Tripod Vase (pre-Columbian), Late Classic, Ulna Valley, and Honduras, correspond to this course model.

Spinden, Herbert. *A Study of Maya Art*. New York: Dover, n.d. In this work, with over 750 illustrations, the religious and philosophical ideas reflected in Mayan art are explored in the context of town planning, carved altars, and other artifacts.

State-adopted textbooks for the visual arts, various publications and dates. Chapters from the following textbooks that are adopted by the California State Board of Education or approved for legal compliance focus on topics related to this unit:

Art in Focus (Mission Hills, Calif.: Glencoe). A section is devoted to pre-Columbian art from Mexico and Central America.

Understanding Art (Mission Hills, Calif.: Glencoe). The art of the Andes, in its many forms, is explained, as is the art of Meso-America, including that of the Olmec, Maya, and Aztec.

Tribal Design. Crizmac Art and Cultural Education Material, P.O. Box 65928, Tucson, AZ 85728-5928, (602) 323-8555. This program introduces students to images of art from five major indigenous cultures, those of Alaska, New Guinea, pre-Columbian Mexico, Pacific Northwest Coast, and Africa. Individual units are available, each including a filmstrip, an audiotape, a teachers' guide, a language arts booklet, and a poster-size map.

VISUAL TEXTBOOK FOR THE CALIFORNIA HISTORY-SOCIAL SCIENCE

FRAMEWORK: Civilizations of the Americas. The University Prints, 21 East Street, Winchester, MA 01890, (617) 729-8006. This company has prepared sets of 5 1/2" x 8" (14 x 20.3 centimetre) art prints that are coordinated with the seventh grade course model. The set for each unit is available boxed, loose-leaf, or bound in durable covers that open flat. Most prints are black-and-white, although some are in color; each print is captioned. Prints also may be purchased individually (seven cents each for black-and-white prints). This set of 42 prints includes works from the Mayan, Incan, and Aztec cultures. The civilizations come to life as students analyze pyramid construction, masks, wall paintings, codex pages, stone carvings, pottery, statues, silver work, tapestries, and other art and artifacts.

World Music Press, 11 Myrtle Avenue, P.O. Box 2565, Danbury, CT 06813, (203) 748-1131. This distributor features books and recordings of music from many cultures. Music of the Andes (long-playing record) includes examples of a contemporary musical tradition that many ethnomusicologists believe incorporates remnants of Incan music.

“Hello, Columbus”

by Robert Royal

This article is included as background reading for teachers. Written in 1992 during the Columbus Quincentenary, the article addresses some of the issues related to the commemoration but focuses on topics relating specifically to this unit and to U.S. history as well.

Royal begins with a brief but striking discussion of the grandeur and sophistication of early American cultures. But he also reminds readers of fallacies inherent in newly emerging beliefs regarding this era. He directs readers' attentions to some grim but important facts.

Columbus's first voyage to the New World was arguably the single most important event in the emergence of our modern sense that we are all together living on one planet. Yet, as we mark its 500th anniversary, the traditional hero-worship of the Genoese explorer is gone. Most children can count on learning only two things about Columbus in school today: that he was not the first European to reach these shores; and that the history of slavery, oppression, and conquest that followed his explorations makes even his achievements nothing to celebrate.

In many ways, a more realistic appraisal of Columbus should be welcome, as historical truths should always be. Over the years, Columbus has been used as an idealized symbol for everything from the Reformation and the emergence of democratic Protestant America to a role model for Catholics and Italian immigrants. Some of these symbolic distortions had a core of truth to them; others were fabricated from whole cloth. Columbus was a brave and skillful navigator, a visionary explorer, and a devoutly religious man, but he should not be facilely linked with the occupations or preoccupations of subsequent ages. Unfortunately, owing to ideological lenses, a more truthful historical picture of Columbus remains absent in many places. The same is true of the image of the indigenous peoples that he found on these shores. As a kind of compensation for centuries of uncritical hero-worship of Columbus, uncritical hero-worship of Amerindians has become a thriving industry as we approach the quincentenary. Where once the Indians played an incidental role in the story of the European colonization, they now generally occupy center stage, in both political and moral terms. It is an exaggeration, but only a slight one, to say that American Indians have become for many people the new heroes and models to be imitated as we contemplate 1492.

A Wondrous Mosaic

Many of us retain an impression from grade school that in spite of the peoples already inhabiting these lands, the Americas basically were available for the daring explorer to take. This

is a profound falsehood. Hundreds, perhaps thousands, of different indigenous groups lived here at the time of Columbus's arrival, and historians estimate the total population of the Americas at somewhere between 20 million and 100 million. Even the estimates of pre-Columbian population figures have become heavily politicized, however, with scholars who are particularly critical of Europe often favoring wildly higher figures. High starting points make Indian deaths by disease, warfare, and mistreatment all the greater. David Henige has dubbed this "Native American Historical Demography as Expiation." Yet despite their mistreatment by Europeans and devastation by European diseases (large numbers of Indians died as disease passed along trade routes, 80 percent without ever seeing a white man), some Indian groups are more populous today than in 1492. There now are 30 million Indians in Latin America alone, and several times more Iroquois in North America than at first contact.

Some Indians roamed in small hunting bands, while others had settled in immense urban complexes that rivaled major European cities both in size and splendor. The conquistador and, later, talented historian of the conquest of Mexico, Bernal Diaz del Castillo, writes of the Aztec capital Tenochtitlán that the Spaniards almost literally could not believe their eyes when they "saw things unseen, nor ever dreamed":

We saw temples and oratories shaped like towers and bastions, all shining white, a wonderful thing to behold. And we saw the terraced towers, and along the causeways other towers and chapels that looked like fortresses... We turned our eyes to the great marketplace and the host of people down there who were buying and selling. . . Among us were soldiers who had been in many parts of the world, at Constantinople, all over Italy, and at Rome; and they said they had never seen a market so well-ordered, so large, and so crowded with people.

Unexpectedly, on the high Central Mexican plateau, served by causeways in the middle of a lake, sat one of the most remarkable cities in the world. Anyone who thinks all Native American societies were primitive and produced only primitive art should visit the Museo Nacional de Antropologia in Mexico City.

Illinois's Great Pyramid

Nor were the ancient Mexicans alone among indigenous peoples in such achievements. Successive waves of high urban civilizations, including Olmec, Toltec, and Mayan, left remains of similar quality and scale, although by the arrival of Columbus these urban centers had long since dispersed or declined. Like other Indian communities, however, they had created vast agricultural networks, including irrigation systems, and had discovered and made use of varieties of corn, beans, and squash. These Mesoamerican civilizations had also arrived at impressive intellectual achievements. Their calendars were more accurate than those used in Europe at the time, and their mathematicians had discovered the concept of zero and how to use it in computations. (Europe had borrowed this concept earlier from the Arabs.)

Further south, the Incas had created what was probably the largest empire on the face of the Earth in 1492, larger even than China's. The Incas also resolved the problems of governing over long distances broken up by mountains and valleys much as had the ancient Romans, by building a road system and a political, military, and civic complex that astonished Europeans for centuries after. The historian William Prescott could say of the mean ruins as late as the nineteenth century:

The traveller still meets...with memorials of the past, remains of temples, palaces, fortresses, terraced mountains, great military roads, aqueducts, and other public

works, which, whatever degree of science they may display in their execution, astonish him by their number, the massive character of the materials, and the grandeur of the design.

Alexander von Humboldt, the natural scientist and explorer, stated: "The roads of the Incas were among the most useful and stupendous works ever instituted by man." The Incas also developed over 3,000 kinds of potatoes to meet nutritional needs; most of those species are unknown to the rest of the world even today. The rulers of the empire were so stupendously wealthy that they were able to fill an entire room with gold as a ransom when Francisco Pizarro demanded it; Pizarro executed the captive emperor anyway.

Nor were such advanced achievements limited to what is now Latin America. Across the Mississippi River from St. Louis, early Mississippians built a metropolitan center, often referred to as Cahokia, with high, earthen, pyramid-like mounds similar to the kinds of temples found south of the Rio Grande. The city flourished from circa A.D. 950-1350, evidently undergoing some sort of crisis before the European arrival. Its culture continued to influence Creek, Cherokee, Chickasaw, Choctaw and other Mississippian tribes, and knowledge of earlier practices at Cahokia can now only be guessed at through physical evidence and the early European testimony about then-intact kindred groups. All uncertainties aside, however, the sheer physical magnitude of Cahokia's achievements is indisputable; on the banks of the Mississippi, 30,000 people are believed to have lived in a city containing a pyramid that occupied more land than the Great Pyramid of Giza in Egypt.

Lore and History

We do not usually think of advanced urban centers when we think of Native American culture. But within what is now the United States alone, there had been various other mound builders, along with over 300 other Indian tribes, speaking languages as diverse from one another as are German and Chinese. Even using the word "tribes" to describe these diverse groups cannot convey the range of peoples and social forms between North America's two coasts.

Contemporaneous with the Cahokian mound builders in 1492, whaling peoples on the Northwest coast, nomadic tribes in the interior, cliff dwellers in the Southwest, and numerous other nations dwelled in these lands. Each of these groups showed an ingenious ability to adapt to local environmental conditions and extract the necessities for life from the available flora and fauna. They also gave rise to a rich body of religious, mythological, and practical lore that retains considerable human interest.

The lack of written native languages has blocked a full understanding of this country's Native American history. Because the Mayan glyphs were the only true writing system in pre-Columbian America, we must rely almost entirely on oral traditions and archaeological evidence, where available, to reconstruct Native American history. Often, these two sources do not confirm one another. Later accretions to oral histories and gaps in the physical evidence introduce uncertainties everywhere. The written testimony of European settlers helps, but inevitably contain inaccuracies and misunderstandings. Given the economic, political, and military interaction of native peoples, all these instruments, even combined, leave much uncertainty. It is as if we had to reconstruct several centuries of Italian Renaissance history, not from the documents of the warring city-states, but from the anecdotal accounts of Arab traders who had contacts with Genoa, Venice, Florence, or Naples.

Many interested parties have rushed to try to fill in the picture. Historians have a fairly good idea of the basic day-to-day material life of the Eastern Woodland tribes that the Europeans first encountered, or of the Plains Indians hunting buffalo before the Europeans brought back the horse to North America. (The horse was native to America, but was wiped out during the last ice

age about 12,000 years ago.) In fact, many of us feel nostalgia for the life close to nature that these peoples led, even if they lacked some of the advantages of their more urbanized neighbors. What is not as clear to us, however, is the human relationship these neolithic societies bear to each other and to us.

What's In a Name?

Just one example of the difficulties we encounter here: What should the various peoples in the New World prior to Columbus be called? Many Indian groups today reject the name Indian, because they regard it as a Eurocentric imposition, and a mistaken imposition at that, since Columbus thought he was in the Indies. "Native American" has become a more politically correct term but has its own problems for several reasons. First, it invites confusion with all the rest of us who are native-born Americans. But more significantly from the indigenous point of view, it does not escape European categories. "America" was a name formed in the wake of another Italian explorer, Amerigo Vespucci. It is difficult to see how being named after an Italian is less Eurocentric than being named after an East Indian.

This difficulty in finding a name for all the peoples of the New World reflects an inescapable truth unwelcome in some quarters. Some of the parties involved in the quincentenary have tried to deny that Columbus "discovered" anybody. The natives already knew who and where they were, and did not need to be "discovered" in this view. But this line of argument has taken a valid concern and pushed it beyond its proper legitimacy. In point of fact, the native peoples of these continents did not know where they were, nor even that they inhabited a globe. Nor did they know one another very much, hence their lack of a name for themselves as one group.

That consciousness only emerged much later, when some native groups formed a kind of pan-Indian agenda to protect themselves against whites. PanIndianism, almost a mystical concept for some modern activists, certainly did not exist and could not have existed prior to Columbus's discovery. Pre-contact native peoples differed from and fought with one another too much for any such solidarity to emerge over a very wide area. Recent scholarship has refuted the myth that Columbus proved the world was round to Europeans. Educated Europeans in his day already knew that. But he did prove it to Indians, who suddenly found themselves, for good and evil, an integral part of one worldwide human race.

Earth's Keepers and Despoilers

Being part of that race has consequences. These diverse peoples should have been respected for their own cultures and peacefully brought into interaction with the Europeans. Such peaceful cultural mixing has rarely occurred in history, and certainly did not occur very often in the Americas. But being part of one human race also means being open to comparison with other cultural practices and norms, and when we turn to that aspect of our encounter with native peoples, the discussion rapidly heats up.

For example, Indians are often recommended to the industrialized modern world as model ecologists. These recommendations are based on the assumption that Indians lived close to nature and followed a natural sense of balance in their hunting, agriculture, and manufacturing. We have already seen how diverse a group of people we are referring to when we say Native American, and it will come as no surprise to realize that there is no one "Native American" practice or doctrine that can be universally invoked as a counterweight to modern Western views on the environment or any other subject. To be faithful to the Native American cultures, we can only proceed by examining the beliefs and practices of specific groups.

The Eastern Woodland tribes, for instance, had a certain fear and reverence for the spirits of the woods that controlled the animals and plants; hence, their reluctance to offend by taking for

their own use beings that belonged to the spirits. But this is far from modern concepts of ecology. Indians in fact overhunted deer and beaver even before the arrival of the white man, and did not seriously try to preserve the resources in the vicinity of their villages. As a result, the typical woodland village, having exhausted local soil and game, had to move on average every eight to ten years. Their numbers were small enough, and land plentiful enough, that this caused no extensive permanent damage, but neither is it much of a precedent for modern worries about nature.

The higher urban cultures often were not nearly so benign. Archaeologists are uncertain why, for example, the high Mayan culture reverted to a simpler form over 500 years before Columbus. But to judge from the evidence of the ruins in most cities, epidemics, warfare, political turmoil, deforestation, and other environmental factors appear to have played a prominent role. Wilcomb Washburn, the former director of the Office of American Studies and a long-time Smithsonian scholar of Indian life, has justly observed of indigenous Americans, "They were not ecologists in the sense of twentieth-century interest groups... [E]ven in the earlier, 'unspoiled' phase of native existence on the continent, there is evidence, such as the bison herds driven off cliffs, to indicate that Indians were not the careful stewards of Mother Earth they are sometimes thought to be."

Regeneration Through Blood

Modern ecologists invoke a harmony with nature that they believe they find in Indian spirituality as opposed to the "be fruitful and multiply and have dominion over the Earth" philosophy that they often see as the biblical basis for Western ecocide. Yet no certain evidence of that harmony in its modern sense is to be found among native cultures. In fact, some quite different concepts of harmony are far clearer and far less happy than we might think. Among the Aztecs, Maya, Incas, and even some North American tribes, a cosmology common to many primitive peoples emerged. In that cosmology, everything in nature is cyclical, even the creation and destruction of the world. Religious rites were performed to keep the universe and the social order from getting out of kilter. The Nobel prize-winning poet Octavio Paz explains:

The religious foundation common to all the Mesoamerican peoples is a basic myth: the gods sacrificed themselves to create the world; the mission of the human being is to preserve the universal life, including his own, feeding the gods with the divine substance: blood. Thus, war is not only a political and economic dimension of the city-state but a religious dimension.

It was this system of beliefs that lay behind the human sacrifices among the Aztecs and Incas that so horrified the Spaniards who first encountered them. In fact, the Spaniards were able to win over tribes subjected to the Aztec empire in part by their promises that young men would no longer be sent as tribute to the capital for human sacrifice.

Occasionally a kind of anthropological racism is used to distance these Latin American practices from those of North American Indian cultures. If we discover that, for example, the Pawnee used to sacrifice a maiden annually, some historians will see in this Mexican influence, even though no evidence for this "contamination" exists. Similarly, the mound-building cultures of the U.S. Southeast, like the Muskogean, appear to have had a kind of ritual suttee and other human sacrifices at the funerals of members of the upper classes. Some of these societies were rigidly hierarchical slave societies that subordinated women, and they too are often said to show Mexican influence. Yet according to Philip Kopper, a writer for the Smithsonian Institution, "No prehistoric site in the Southeast has yielded a single Mexican relic."

It is not as though only Mexican or other highly developed indigenous civilizations possessed social practices we now deplore. Almost every Indian tribe in existence in 1492 would provoke violent reactions for some of its practices if faithfully reconstructed today. The Sanpools, who

lived in the Northwest on the Columbia River, practiced absolute equality and pacifism. They alone, perhaps, would escape contemporary criticism. But pacifism was a rarity among indigenous peoples. Most Indian groups were warrior societies. The Sanpoils were highly unusual and fortunate in that they were able to preserve their equality and pacifism between two very different types of societies: those on the Northwest Coast with rigid social structures and slavery, and those on the Great Plains marked by bellicosity.

Democratic Torturers

Sometimes contradictory traits show up within the same indigenous group. The Iroquois were probably the most highly developed Native American political association in North America, and much has been written of their indisputable achievements. DeWitt Clinton called them the "Romans of the West" because of their "martial spirit and rage for conquest." The so-called Iroquois confederation—the nascent civic structure of the Seneca, Onondaga, Oneida, Mohawk, and Cayuga—arrived at peaceful and relatively democratic relations among the five nations. In 1987, the U.S. Congress formally proclaimed that the Iroquois played an important role in the creation of American democracy. As a result, American schoolchildren are taught today that the Iroquois confederation was a model for the American Founders when they began to consider how to organize the 13 newly-independent former colonies.

While the confederation is a clear sign of Native American diplomatic skills, controversy is widespread among historians over whether it exerted much influence on the Founders. A few passages show that the Founders were, of course, aware of the confederation. Ben Franklin probably captured the spirit of how most of the Founders felt about the question in his remarks on the need for a union:

[I]t would be a very strange Thing, ... ignorant Savages should be capable of forming a Scheme for such a Union, and be able to execute it in such a Manner, as that it has subsisted Ages, and appears indissoluble; and yet a like Union should be impracticable for ten or a Dozen Colonies.

Franklin's combination of disparagement ("ignorant Savages") and admiration (suggesting "a like Union") reflects the vague interest typical of his times. Not until the 1840s did anyone investigate the actual structure of the confederation. Consequently, its role in shaping the Constitution is doubtful to say the least.

In any case, outside the constituent Iroquoian groups, the confederation practiced what can only be called an imperial policy toward other peoples. Francis Jennings, an appreciative student of Indian cultures, has written that the Iroquois, because of their political structure, considered themselves the wisest of Indians and "this rationalized their role of hegemony over other tribes. It was for the latter's own good—not an unfamiliar argument among imperialists." The British, seeing heavily fortified Iroquois villages, called them castles—a further indication of the kinds of relations that existed among tribes long before the white man added his evils.

We can also get some idea of the way the Iroquois treated prisoners of war from the experience of the French Jesuits in Canada. Paul le Jeune, one of the earliest missionaries, remarked in 1632 on the "shocking cruelty to captives" among the warring tribes. Seventeenth-century France, like the rest of Europe at the time, was not exactly unfamiliar with torture and executions, but the French found native treatment of prisoners excessive even by those standards. To get a concrete sense of the world in which the Jesuits operated and the practices they sought to change it is instructive to recall what happened to Jean de Brébeuf. Brébeuf was a talented linguist who learned several Indian languages. Like many of the Jesuits, he was constantly having to defend himself from Indian charges of witchcraft. (Even writing and reading were so alien to native ways of thought that they evoked fear.) Many Indians believed that sorcery was

the cause of epidemics brought by the Europeans. Brebeuf was working among the Hurons, tending the sick and trying to teach Christianity, when he was captured along with his colleague, Gabriel Lalemant, by the Iroquois. They tortured him to death, in steps: boiling water was poured over his head three times in imitation of baptism; hatchets were heated in a fire, strung together, and then placed around his neck; a belt of resin and burning pitch was attached around his waist; his lips and tongue were cut off; pieces of his own flesh were cut off, roasted, and eaten in front of him, and finally, his heart was dug out and eaten, and his blood was drunk.

Glory and Horror

To recall some of the negative dimensions of native cultures does not exonerate Europe for its own failures and atrocities. Europeans committed acts just as bad, and their culpability is worse: by their own principles they should have known better. But a better knowledge of the shortcomings, as well as the achievements, of native culture is essential, not least because it makes Indians real people for us again.

For a long time, Indians were portrayed as poor savages, too primitive to be taken seriously as worthy members of the human race. Lately, the opposite distortion has occurred, but with much the same effect. The contemporary Indian has become a kind of "red angel" living in harmony with God, nature, and his fellow man, and not a living creature of flesh and blood like the rest of us. Both attitudes are ultimately imperialistic, because they impose on the Indian images of one stripe or another that the mainstream culture feels it needs at a given time. Instead of paying Native American cultures unwarranted compliments, it would be far more respectful of the various indigenous peoples in these lands to learn about their real histories and to appreciate them for what they were and are—human beings with all the glory and horror the human condition entails.

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Geographic Background and Concepts: The Americas

In this section, students will be studying three great civilizations—the Mayan, the Aztec, and the Incan—that flourished in the New World. Each of these civilizations developed in a different location—two in Middle America (the Mayan and Aztec) and one in western South America (the Incan)—and each occupied a different environmental setting. The areas in which these civilizations developed became important culture hearths. Geographers use a variety of terms to identify the regions discussed in this unit. Since these terms may have different meanings, this variation can be confusing. The list below comprises their most common, generally accepted meanings:

North America—Refers to the continent of North America as it is traditionally defined, that is, the lands of the New World north of and including Panama

South America—Refers to the traditionally defined continent of South America, that is, all lands south of Panama

Middle America—Refers to a subdivision of North America encompassing the mainland territories lying between the United States and the northern edge of South America (present-day Colombia)

Central America—Refers to the region within Middle America that encompasses the lands lying between the southern border of Mexico and South America

Meso-America—A cultural term referring to the areas in present-day Mexico historically occupied by the Mayan and Aztec civilizations

The physical geography of Middle and South America is extremely varied, ranging from tropical coastal lowlands to snow-covered mountain peaks. The most dramatic and significant variations, the changes in elevation, result in a series of altitudinal zones in which distinct environments and ways of life prevail. Geographers refer to this pattern as one of *vertical* (or *altitudinal*) *zonation*. In Middle and South America, five zones are commonly recognized:

Tierra caliente—The lowest zone, “hot land,” lies between sea level and about 2,500 feet (750 metres) and includes the coastal plains and low-lying valleys where tropical conditions prevail. Tropical crops such as bananas are grown in this region today.

Tierra templada—This “temperate land” lies above the *tierra caliente* and extends up to 6,000 feet (1800 metres). In present-day Latin America, the largest clusters of population are found in this zone. Agricultural production includes maize, wheat, and—perhaps most prominently today—coffee.

Tierra fria—This “cold zone” is found primarily in South America in the higher reaches of the Andes, from about 6,000 to 12,000 feet (1800 to 3600 metres). The tree line marks the upper limit of this zone. Agriculture centers on hardy crops, such as potatoes and barley.

The puna—This cold, barren zone above the tree line extends as high as 15,000 feet (4500 metres). Its economic usefulness is limited to the grazing of sheep and other hardy livestock.

Terra helada—This “frozen land” is the zone of permanent ice and snow found on the highest mountain peaks.

The Mayans inhabited the lowland tropical forests of the Yucatan Peninsula until around A.D. 900, when they abandoned their ceremonial centers in this region and shifted to the drier northern part of the peninsula and the highlands of the interior. Of the three civilizations, the Mayan made the greatest use of *tierra caliente*. The Mayan economy was based on maize cultivation, which supported a large population in the wet lowlands. Mayans also grew cotton and supported a rudimentary textile industry. The Mayans engaged in regional trade, exporting finished cotton cloth by sea-going canoe to other parts of Middle America in exchange for cacao and other items.

The Aztec civilization was centered in the Valley of Mexico, a mountain valley about 30-40 miles (48-64 kilometres) wide and 8,000 feet (2400 metres) above sea level. At its peak, the valley supported a population of one to two million people. (This valley, in which Mexico City is located, is an important region of Mexico today.) The Aztec economy as a whole is thought to have supported up to 15 million people. Although they lived in highland areas (*tierra templada* and *tierra fria*), the Aztecs also drew on the resources of the coastal tropical lowlands (*tierra caliente*) once controlled by the Mayans.

The Incan civilization was centered in the Andes highlands of western South America. At its peak, it was the most densely populated and best organized civilization on the continent. The Inca Empire differed dramatically from other early civilizations, such as those of Egypt, China, or Rome, in which rivers and waterways provided the means for the circulation of goods and ideas. The Incan civilization, in contrast, was centered on a series of high intermontane valleys called *altiplanos* (high plains). The capital was Cuzco, a city of 100,000 people at an elevation of 11,000 feet (33,000 metres). To maintain and control their empire, the Incas constructed series of roads and bridges through some of the most rugged terrain in the world, employing engineering skills that were often comparable to those of the Romans. The Incan economy exploited the full range of altitudinal zones, from the coastal lowland valleys to terraced mountain slopes. Not only did the Incas create complex systems of canals and irrigation but also often transported fertile soil from lowland areas to the highlands to increase productivity. Guano, or bird droppings, was often imported from offshore islands for use as fertilizer. The important crops that were grown and traded among inhabitants of these various zones included potatoes, maize, cassava (manioc), peppers, beans, and squash.

Several important geographic concepts are illustrated in this unit, including:

Migration—The permanent relocation of people from one location to another. One of the most important migrations in human history was the prehistoric migration of human beings from Asia to America. This migration is believed to have occurred during the late Ice Age, when sea levels were low enough to expose a dry-land connection, or land bridge, between the two continents across what is now the Bering Strait. The date of this dramatic migration remains uncertain: Some authorities argue that it occurred around 20,000 years ago, while others push for a date as early as 32,000 years ago. Whatever the date, people are known to have spread to the farthest reaches of North and South America by 11,000 years ago.

Culture hearth—The heartland or source area of a major culture. In this unit students study three distinct culture hearths—those of the Mayas, the Incas, and the Aztecs.

Origins of agriculture—Plant domestication and the development of agriculture were key factors in the rise of each of the civilizations studied in this unit. Both Meso-America and highland South America were important culture hearths for agricultural domestication. Some of the major crops domesticated in these regions include:

Middle (Meso-) America

avocado
beans (various types)
cacao
cotton
cassava (manioc)
maize
pumpkin
squash
sweet potato
tomato

Highland South America

chile pepper
common pepper
cotton
amaranth
lima bean
potato

Diffusion—Refers to the process by which a culture or cultural trait spreads from its source area across a much wider area. By means of the diffusion process, use of the foodstuffs listed in the previous definition spread to other parts of the Americas. (For example, maize, beans, and pumpkins were being grown on the East Coast of North America when the Europeans arrived; these were some of the foods the Indians gave the Pilgrims at the first Thanksgiving.) As contact with Europe increased, the use of these foodstuffs spread to the rest of the world as well. Cassava is now an important food crop throughout much of tropical Africa, and the potato has been important to the economy and history of Europe, especially in Ireland, Germany, and Russia.

Some Key Place Names

Physical Features

Amazon River
Andes Mountains
Baja Peninsula
Cape Horn
Caribbean Sea
Gulf of California
(Sea of Cortez)
Gulf of Mexico
Isthmus of Panama
Lake Maracaibo
Lake Titicaca
Yucatan Peninsula

Countries

Argentina
Bolivia
Brazil
Chile
Colombia
Ecuador
Mexico
Panama
Peru
Venezuela
Tenochtitlan
(historical)

Major Cities

Bogota
Buenos Aires
Cuzco
La Paz
Lima
Machu Picchu
(historical)
Mexico City
Quito
Rio de Janeiro
Tegucigalpa



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